ated. Both of the joint spaces formed by talus and calcaneus with the cuboid bone were narrowed evidently. There was a volume increase in hypointense synovial membrane. When the tendon structures were analysed, a homogeneous and hypointense thickening was marked in tendon sheath. 8 RA patients had feet with normal consruction but 12 RA patients had feet with complete abnormal construction.

**Conclusion:** Therefore the evaluation of MR imaging findings could be detected earlier than the complete structure abnormalization in affected joints, these analyses were valuable in terms of early diagnosis of the disease. Such an extensive analysis that contains examining of whole tissues in the joint formation will shed light on the differantial diagnosis and the therapy process of the disease.

## P-55

### Histopathological effects of linear alkyl benzene sulfonic acid (LABSA) on zebrafish (Danio rerio) gills

Öztürk B*, Güneş S*, Alsaran M*, Akbulut C*, Genç H*, Zengin M*, Yön ND*

*Sakarya University*

Linear alkyl benzene sulfonic acid is one of the most important raw materials in detergent production process. It is widely used in in industry as the active component of synthetic detergents, being frequently found in domestic cleaning products. Once used and disposed, linear alkyl benzene sulphonic acid (LABSA) can enter natural water sources by discharge of domestic sewage and industrial waste. In this study, investigation the histological effects of LABSA on gill tissue of zebrafish was aimed. Zebrafish were maintained under the standardized conditions at 28°C±1 oC. The light / dark cycle was 14h/10h. In the study, two dose groups (0.5 mg/L, 1mg/L LABSA) and one control group were determined. After 48 hours of adaptation LABSA were added to the aquarium. For the histological analysis, at the end of 5 days, gill tissues were dissected. Tissues were fixed with 10% neutral buffered formalin fluid for 24 h. Tissues were dehydrated and embedded in the parafin wax and sectioned at 5 µm thickness and stained with Hematoxylin Eosin. The samples were evaluated by examining under the light microscope. In control group normal gill histology was observed. Primary lamellae, secondary lamellae, epithelial cells and mucus cells monitored. Mucus cells were detected at the edge of primary lamellae. Secondary lamellae, seperated from central primary lamellae which supported by cartilage and connective tissue were detected clearly. In the 0.5 mg/L LABSA exposure group, opening at central vena was detected. Thinning was observed in epithelium of primary lamellae. Dysmorphism, hyperplasia and hypertrophy were monitored at secondary lamellae. Aneurism was observed at secondary lamellae. In 1 mg/L LABSA exposure group, increase in diameter of central vena was detected. Thickening at the epithelium of central vena was observed. Dysmorphism, thickening and deformation were monitored at secondary lamellae. As a result, LABSA has led to a deterioration in fish gills tissues. In this study, statistical methods were not used.

## P-56

### Determination of the density of neovascularization in invasive front in skin squamous cell carcinoma, with varying degrees of histological differentiation

Mazhenkovska LK*, Janevska V**, Basheska N***, Crvenkova S****, Petrushevska G**, Spasevska L**, Milenkova L*, Kostovska N*

*Institute of Histology and Embryology, Faculty of Medicine, "Ss. Cyril and Methodius" University, Skopje, Republic of Macedonia; **Institute of Pathology, Faculty of Medicine, "Ss. Cyril and Methodius" University, Skopje, Republic of Macedonia; ***Department of Histopathology and Clinical Cytology, University Clinic Of Radiotherapy and Oncology, Faculty of Medicine, "Ss. Cyril and Methodius" University, Skopje, Republic of Macedonia; ****University Clinic of Radiotherapy and Oncology, Faculty of Medicine, "Ss. Cyril and Methodius" University, Skopje, Republic of Macedonia*

**Introduction:** Angiogenesis is a process of formation of new blood vessels from the existing normal capillaries. Tumors with higher angiogenesis activity belong to the category of very aggressive tumors. Aim of this paper is determination of the density of the blood vessels, i.e. neovascularization in the invasive front of the tumor stroma in skin squamous cell carcinoma (SCC) in relation to the healthy skin and the ratio of the density of the blood vessels in the skin SCC with a different degree of histological differentiation.

**Methods:** The material is consisted of operational materials from 30 patients with skin SCC. Neoplasms were classified according to the degree of histological differentiation (G). Histological sections of the invasive front of the neoplasms, the tumor tissue and the surrounding healthy skin were stained immunohistochemically using specific primary monoclonal antibodies SMA and CD34 and analyzed by light microscopy. The density of the blood vessels in the skin SCC in relation to the dermis of the healthy skin was determined, and the density of the blood vessels in neoplasms in relation to the degree of histological differentiation(G).

**Results:** The histological analysis has shown high statistical difference in the density of the blood vessels in the invasive front of skin SCC compared to the healthy skin (Mann-Whitney U, p=0.0000001). The difference found in the density of neovascularization in the neoplasms with different degree of differentiation (G1, G2, G3) is statistically significant for (Kruskal-Wallis, p=0.0003).

**Conclusion:** The density of the neovascularization changes considerably compared to the healthy skin. Depending on the degree of histological differentiation of the neoplasms, the found differences in the density of the blood vessels are statistically significant and there is positive correlation between

them. The increase of vascularity in the invasive front of the neoplasm in a higher grade cancers suggest about its possible role in the progression of neoplasm.

## P-57

### Weight of the liver, spleen and kidneys regard to ethnic groups and body mass index in chilean individuals over 60 years old

Torrez J*, RiquelmeN**, Torrez F**, Binvignat O*, Olave E*

*Universidad De La Frontera, Temuco, Chile; **Universidad Mayor, Santiago, Chile*

Several factors can influence the weight of the thoracic and / or abdominal viscera. In order to know the average weight of the liver, spleen and kidneys and of Chilean individuals, the information in these organs from 218 necropsies on fresh male cadavers between 2009-2013 was obtained, considering her ethnicity (Mapuche and non-Mapuche), age and body mass index (BMI). Data of bodies without apparent injury or disease of these viscera were studied. The subjects were divided in three groups of age, 60-69 (l), 70-79 (II) and 80-89 (III). In non-Mapuche individuals, in the group I the liver weighed 1.679 g, the spleen 121 g, the right kidney 151 g and the left kidney 153 g; in group III these organs weighed 1.388 g, 93 g, 142 g and 137 g, respectively. In Mapuche individuals, the weight of these organs was lower. Regarding BMI, considering the total number of individuals, the weight of liver was 1.156 g in the low weight group, in the normal group was 1.391 g and in the overweight group was 1,581 g; the spleen weighed 75 g, 98 g and 108 g; the right kidney 103 g, 137 g and 151 g, and the left kidney 109 g, 136 g and 153 g, respectively. These results are compared with other population groups in the world and are a contribution to morphological knowledge of the abdominal viscera.

**Keywords:** Anatomy, abdomen, weight viscera, body mass index

## P-58

### Morphological characteristics of recurrent artery of Heubner

Papazova M*, Dodevski A*, Lazarova D*, Zhivadinovik J*, Matveeva N*, Petrovska S**, Zafirova B*

*Institute of Anatomy, Medical Faculty, "Ss. Cyril and Methodius University", Skopje, Republic of Macedonia; **Institute of Medical Physiology and Anthropology, Medical Faculty, "Ss. Cyril and Methodius University", Skopje, Republic of Macedonia*

**Introduction:** Cerebral circulation, especially arterial, in recent decades has attracted the interest of anatomists and clinicians. Recurrent artery of Heubner is the largest and most constant perforating branch of anterior cerebral artery (ACA). The aim of this study was to determine the morphological and topographic characteristics of the Heubner artery.

**Methods:** The investigations of anatomical characteristics of the recurrent artery of Heubner are made on 133 human brains without cerebrovascular pathology, from both sexes at age from 23 to 68. Brains were fixed in a 10% solution of formaldehyde, and the obtained material was analyzed using a stereoscopic light microscope.

**Results:** Of the brains examined, 94% of the brains had a recurrent artery of Heubner while in 6% of the brains we could not identify the artery. The recurrent artery of Heubner was present as a single vessel in 76% of cases, as a double vessel in 24% of cases. It originated from the junction of the ACA and the anterior communicating artery in 60%, this was the most common type, from the A2 segment of the ACA in 21% of the specimens, and from the A1 segment of the ACA in 19%. The length of the recurrent artery of Heubner is in range from 14 to 46 mm, with mean value of 24 mm. The diameter of the artery is in range from 0.9 to 2.8 mm, with a mean value of 1.3 mm.

**Conclusion:** Detailed anatomical knowledge of the recurrent artery of Heubner is important when considering vascular surgery in the area of the anterior portion of the circle of Willis since improper clip placement can result in occlusion producing neurological deficits.

**Keywords:** Recurrent artery of Heubner, brain, anatomy, origin, diameter

## P-59

### Comparison of preoperative temporal bone CT with intraoperative findings in patients with chronic otitis media

Madan G*, Turamanlar O*, Bucak A**, Acay MB***, Yıldız E**, Gönül Y*, Yusuf Gülsarı*

*Department of Anatomy, Faculty of Medicine, Afyon Kocatepe University, Afyonkarahisar, Turkey; **Department of Otolaryngology, Faculty of Medicine, Afyon Kocatepe University, Afyonkarahisar, Turkey; ***Department of Radiology, Faculty of Medicine, Afyon Kocatepe University Afyonkarahisar, Turkey*

The aim of our study was to investigate the diagnostic confidence level of the presurgical 160-slice CT findings compared with perioperative observational findings about anatomic variations in the structure of the facial canal, lateral semicircular canal and dural plate. 55 patients admitting with middle ear pathology to Afyon Kocatepe University Department of Otolaryngology were included in the study and the mean age was 42 (±15.55) . Preoperative images of the temporal bone of the patient was obtained by tomography Toshiba Aquilion One (Toshiba Medial System, Oktavana, Japan). In determining of the facial nerve canal dehiscence sensitivity 52%, specificity 88%, positive predictive value 73%, negative predictive value 75%, in determining of the dehiscence in the tympanic segment sensitivity 50%, specificity 89%, positive predictive value 71%, negative predictive value 76%, in determining of the lateral semicircular canal dehiscence sensitivity 71%, specificity